Proprietary Statement

This manual contains proprietary information of Avery Dennison. It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the expressed written permission of Avery Dennison.

Product Improvements

Continuous improvement of products is a policy of Avery Dennison. All specifications and signs are subject to change without notice.

FCC Compliance Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: ■ Reorient or relocate the receiving antenna. ■ Increase the separation between the equipment and the receiver. ■Connect the equipment into an outlet on a circuit different than that to which the receiver is connected..
■Consult the dealer or an experience Radio/TV technician for help.

NOTE: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to insure compliance. The user is cautioned that any changes or modifications not expressly approved by Avery Dennison could void the user's authority to operate the equipment.

Liability Disclaimer

Avery Denniosn takes steps to assure that its published engineering specifications and manuals are correct; however, errors do occur. Avery Dennison reserves the right to correct any such errors and disclaims liability resulting therefrom.

No Liability for Consequential Damage

In no event shall Avery Dennison or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or the results of use of or inability to use such product, even if Avery Dennison has been advised of the possibility of such damages

A Letter to Our Customers

Dear Customers,

Congratulation on selecting an Avery Dennison AP 2.4 printer! We believe soon you will find that you have made a cleverest choice!

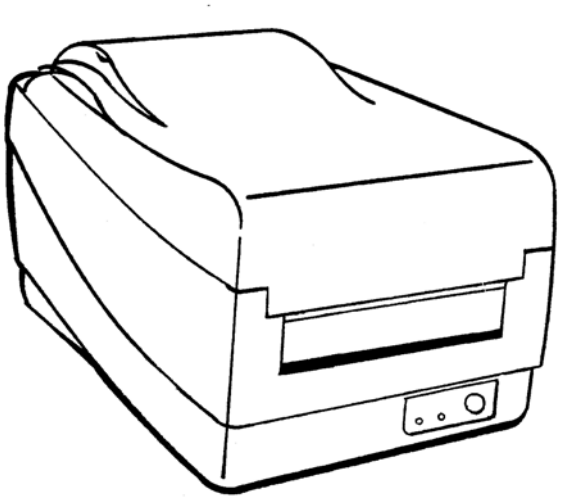
This booklet is a small gift from us. It is intended for helping you to know your printer better, then further to optimize it. Basically, this booklet contains two parts: operation guidance and related valuable information.

In the part of the operation guidance, we will furnish you with a lot of complementary illustrations, so you may pick up those operation guides more quickly.

In the latter chapters of Trouble Shooting, Maintenance as well as Reference Technical information, which we think, you may need them just in case. Therefore, for your quick reference, we try to table them as much as possible.

Enjoy your reading and have a good time with your printer!

Best wishes,
Avery Dennison Printer Systems



Page

Checking Your Box.....1
Power Supply..... 3
Parts and Features.....5
Loading the Ribbon.....9
Loading the Media.....14
Operator Controls.....25
Performing Calibration 27
Printing Configuration Report.....27
Resetting the Printer.....28
Hooking up the Printer and the Computer.....29
Communicate with the Printer.....32
Troubleshooting.....44
Caring for Your Printer..... 48
Reference Technical Information..... 51
Appendix I-Installing Despenser Kit..... ...60
Appendix II -Installing Cutter..... ..66

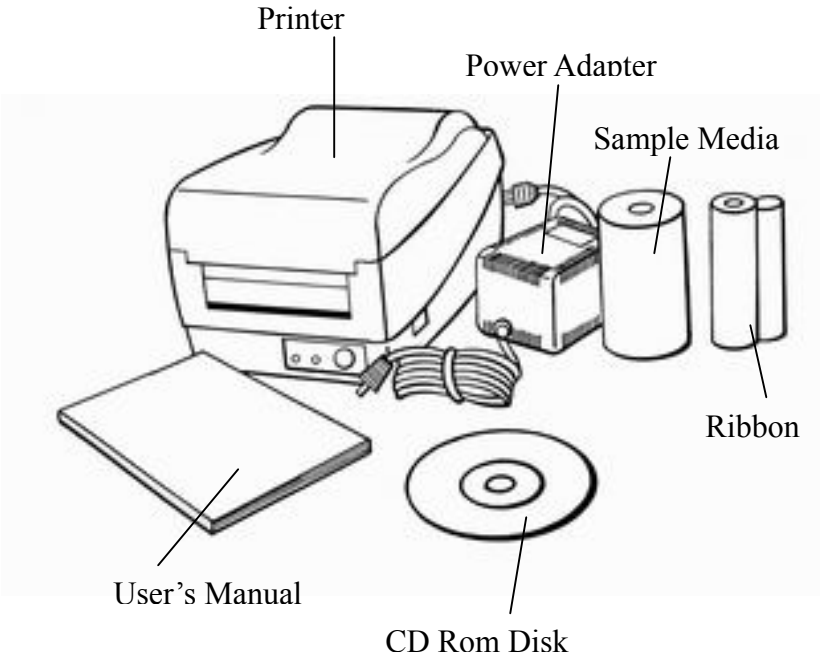
Checking Your Box

Receiving the box of your printer, you are advised to check first for the possible shipping damage. There are two ways you can do it:

1. Inspect the outer appearances of both the box and the printer for possible damage.
2. Raise the top cover of the printer to see if the media compartments are in order.

If damages did occur, immediately file the claim to the shipping company for settlement.

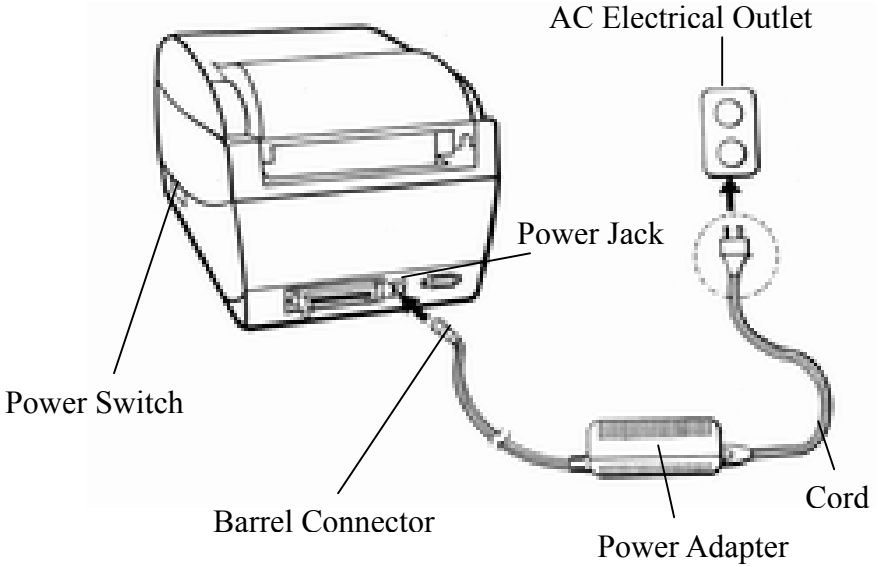
Having performed the primary inspections, next step, please check whether you have received the following accessories together with the printer. If there is any item missing, contact your local dealer to get it.



Note :
No sample media and ribbon are packed with AP 2.4.

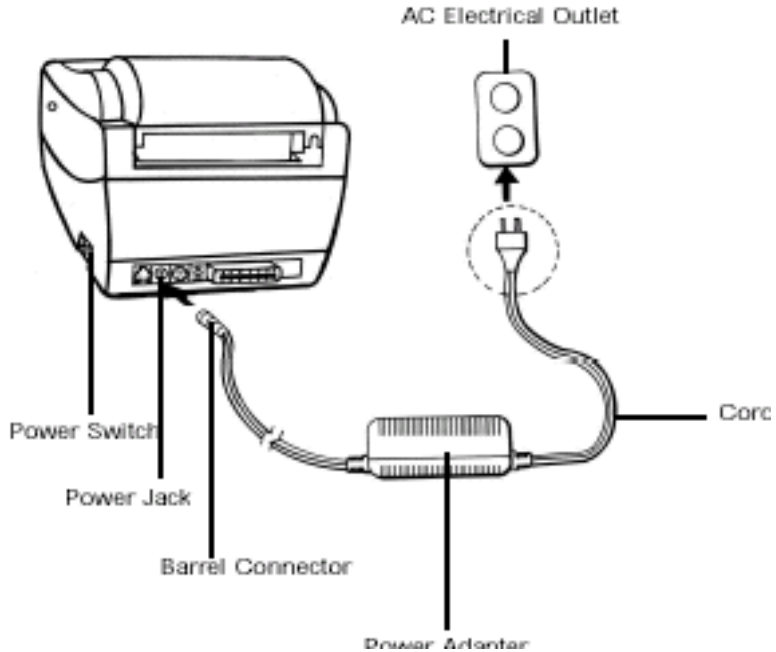
Power Supply

WARNING:
NEVER OPERATE THE PRINTER AND POWER SUPPLY IN AN AREA WHERE THEY CAN GET WET.



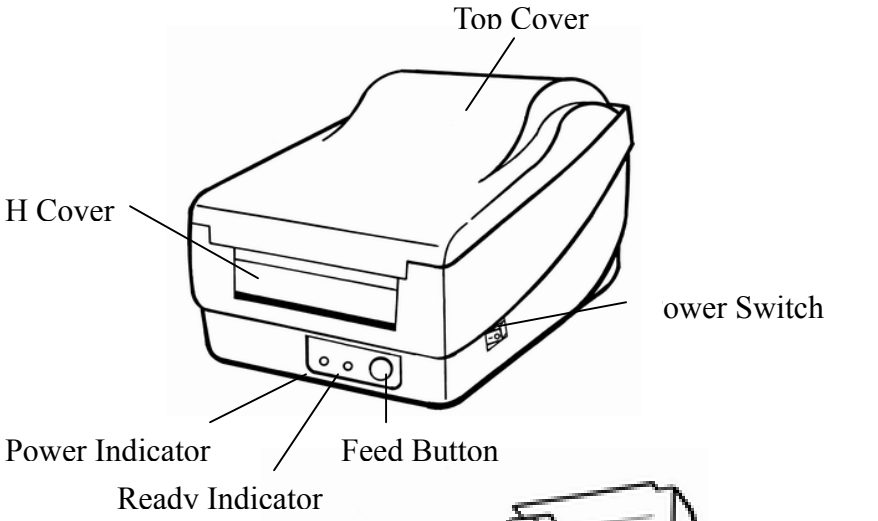
OS-204/214/314

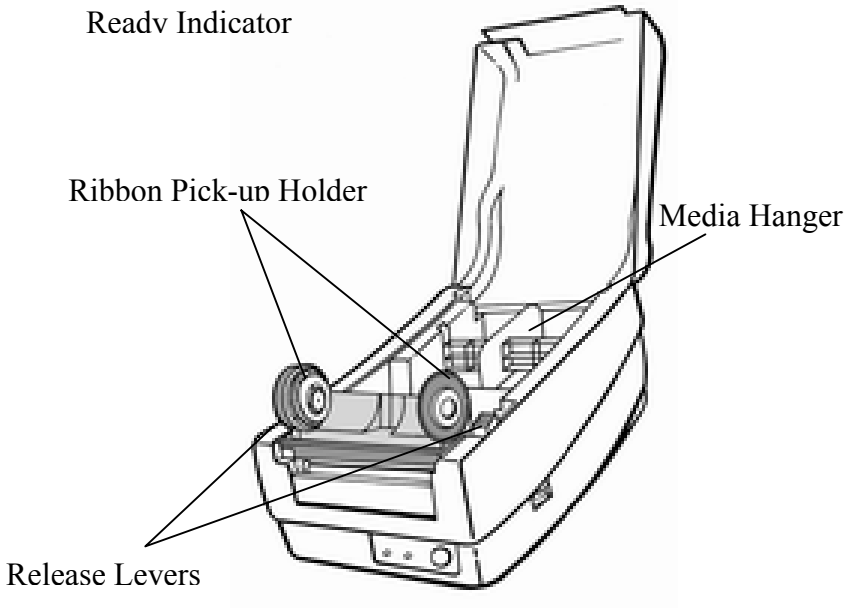
1. The Power Adapter has a barrel connector on one end that must be inserted into the power jack on the back of the printer.
2. Plug the other end of the cord into an appropriate AC electrical outlet.
3. When plugging the connector into power jack, please leave the power switch at "O" position and don't touch the 36 pin parallel connector.

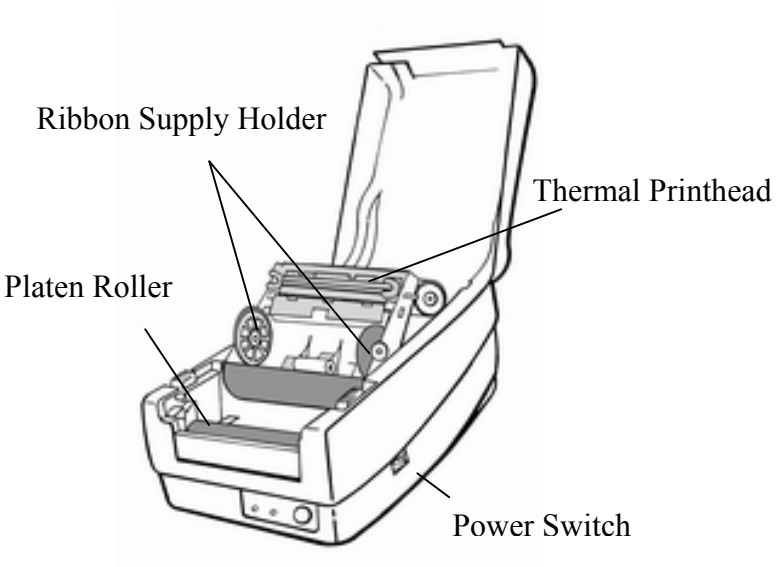


OS-202

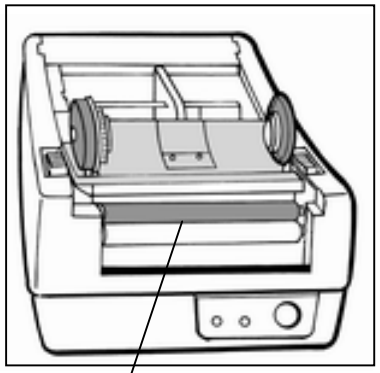
Parts and Features (AP 2.4)



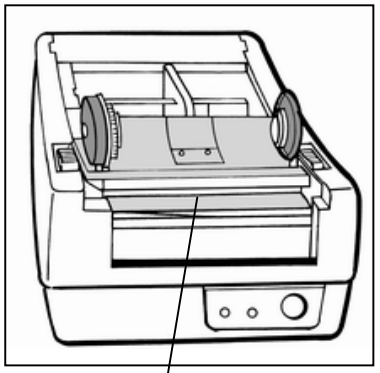




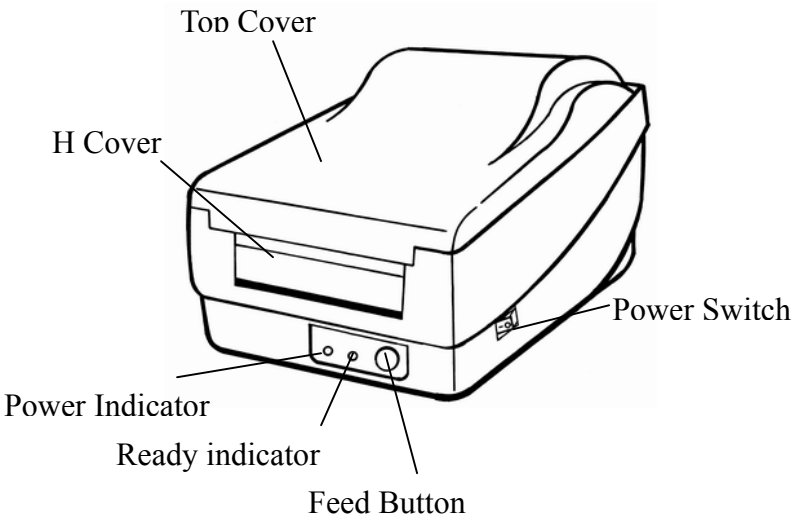
Peel-Off Option

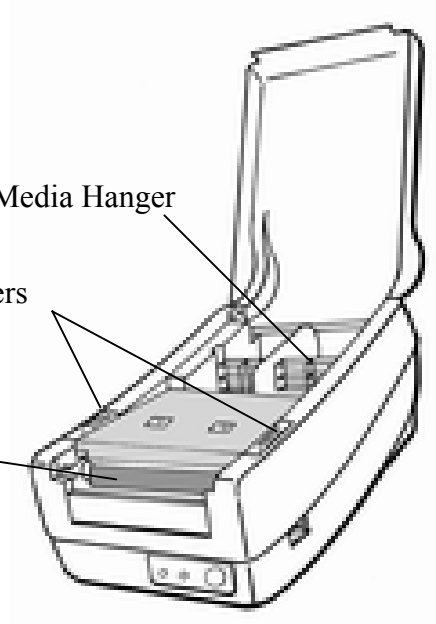


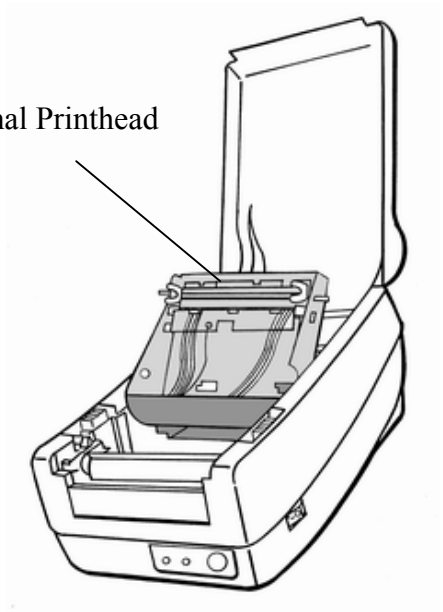
Cutter Option



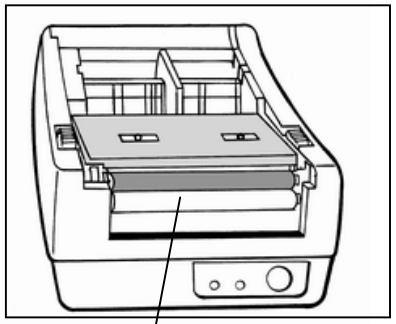
Parts and Features AP 2.4



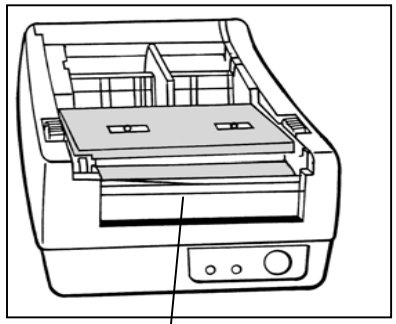




Peel-Off Option



Cutter Option

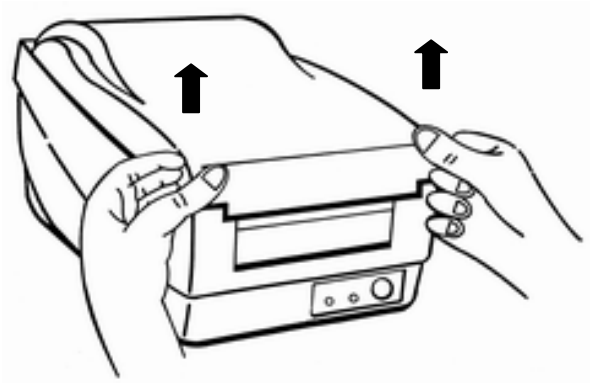


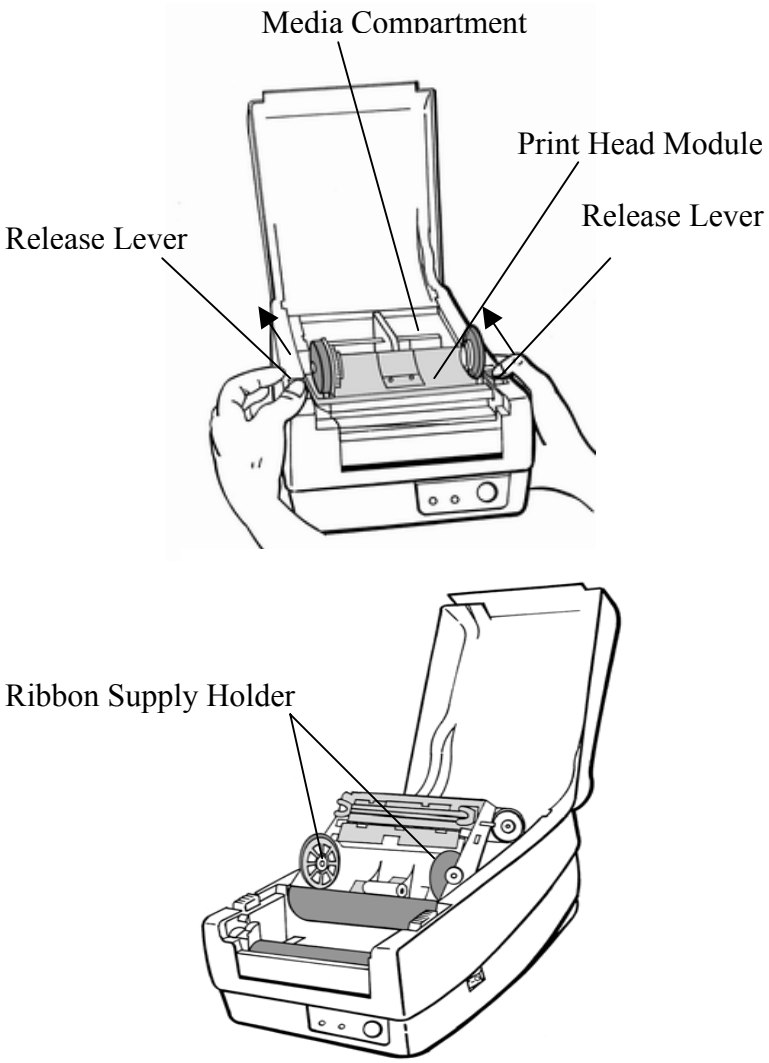
Loading the Ribbon

Note:

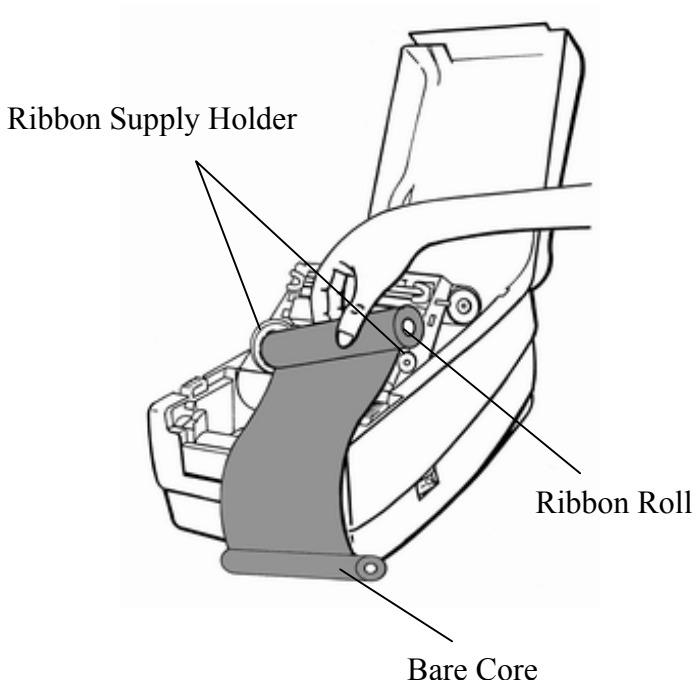
This section is not applicable to the direct thermal printing.

1. Lift the top cover to expose the media compartment.
2. Unlatch the print head module by pushing the two white release levers on the sides toward the rear.
3. Turn over the print head module to expose the ribbon supply holder.

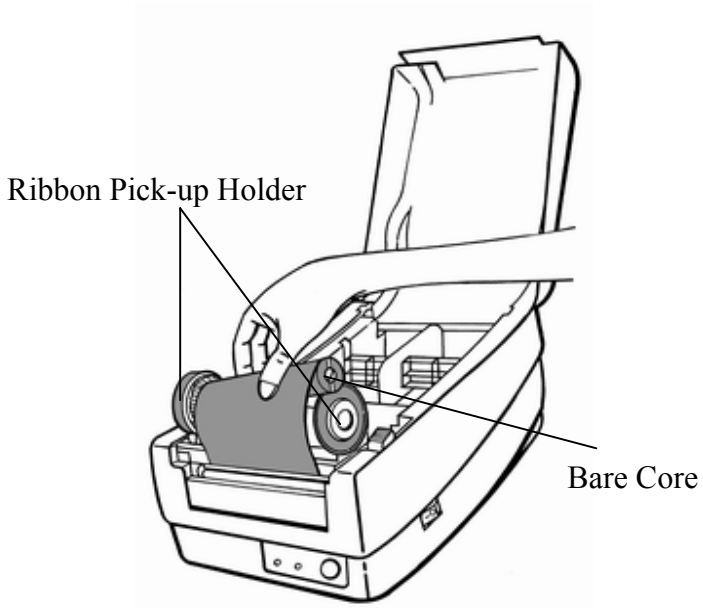




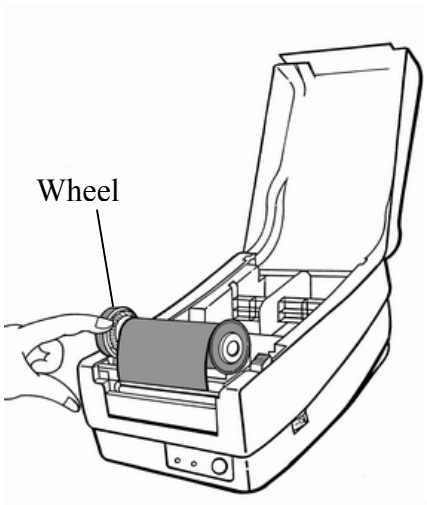
4. Unwrap the ribbon roll pack and separate the ribbon roll and the bare core.
5. Attach the edge of the ribbon on the bare core and wind it a little bit onto the core.
6. Insert the ribbon roll into the supply holder. (first snap in the left side and then the right side)

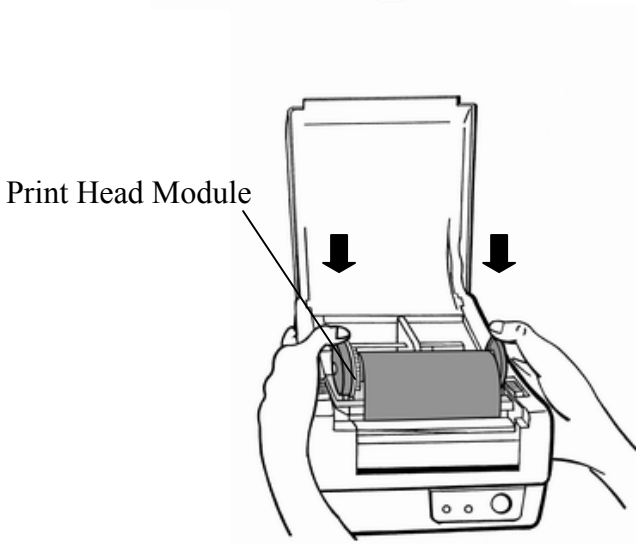


7. Turn back the print head module and then insert the bare core into the pick-up holder.(first snap in the left side, then the right side)



8. Turn the wheel of the print head module to ensure the ribbon is tightly wound.
9. Press down the print head module firmly till you hear a snap.





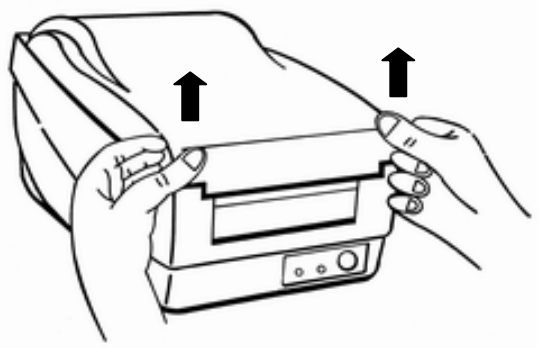
Loading the Media

OS Series printers can be operated in three different options: standard, peel-off, or with a cutter.

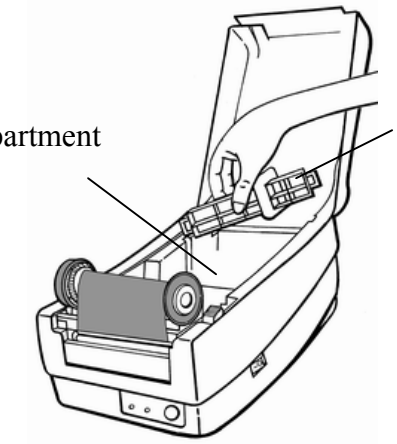
- Standard mode allows you to collect each label freely.
- In peel-off mode, the backing material is being peeled away from the label as it is printed. After the former label is removed, the next one will be printed.
- In cutter mode, the printer automatically cuts the label after it is printed.

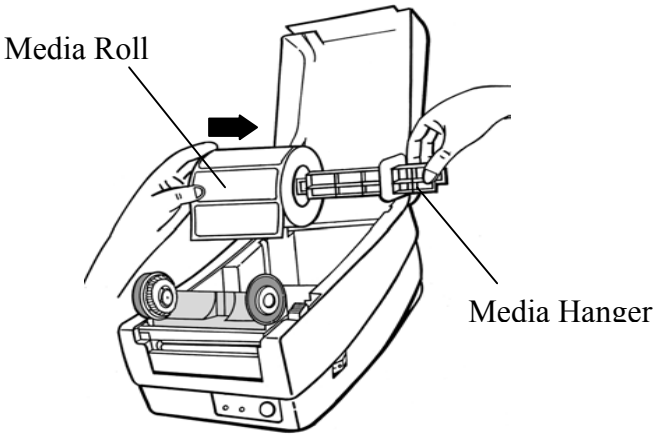
Standard Mode

1. Lift the top cover to expose the media compartment.

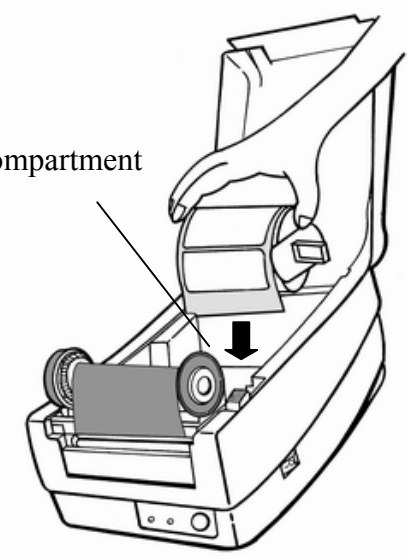


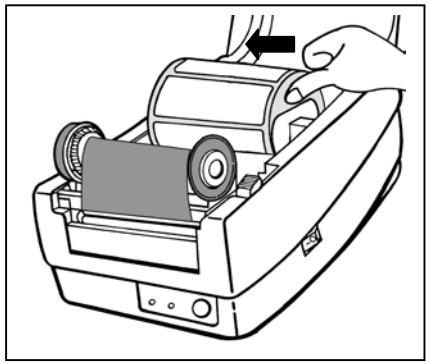
2. Remove the media hanger.
3. Load the media roll onto the hanger from the left.

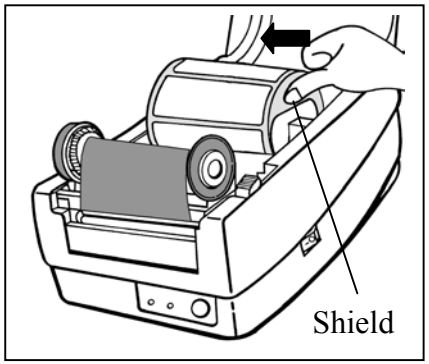




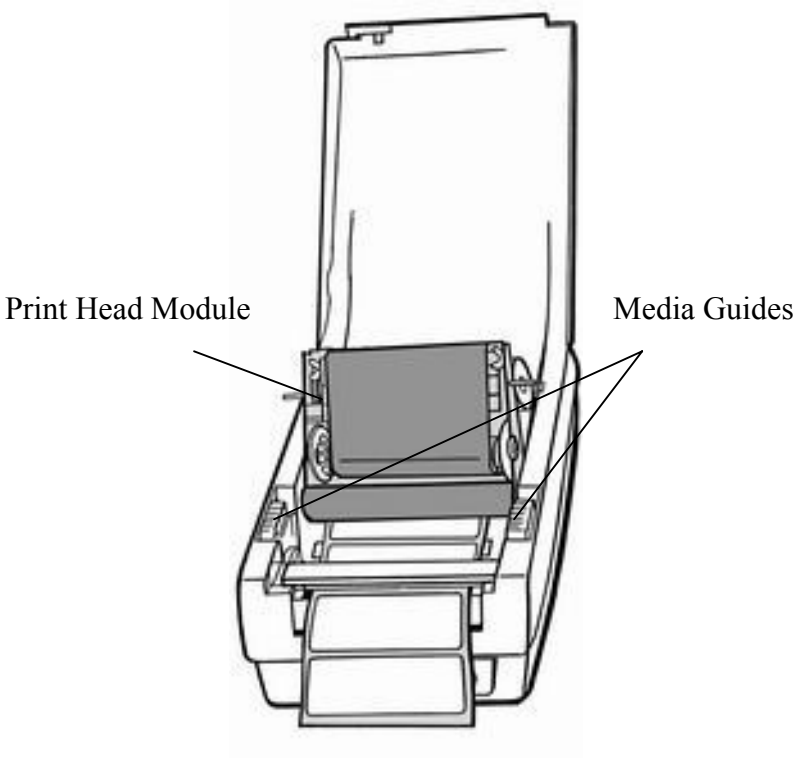
4. Click the media hanger back to the media compartment.
5. Move the media roll to the left end.
6. Move the shield to the left next to the media



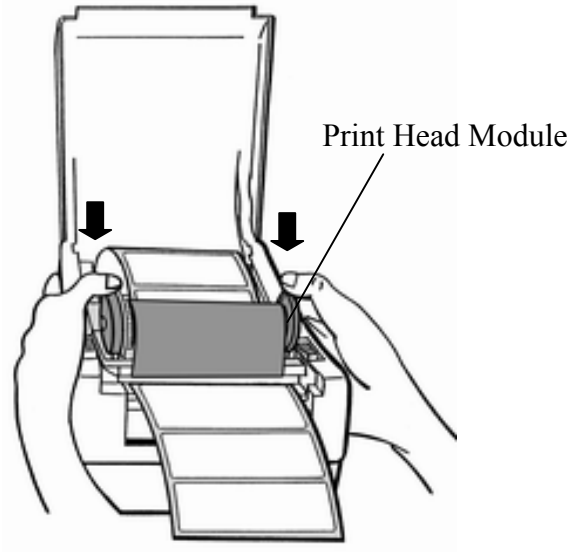


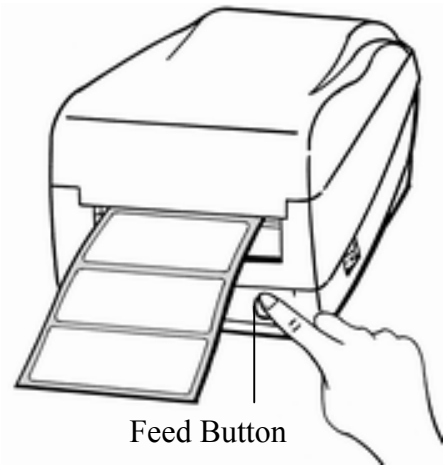


7. Unlatch the print head module.
8. Hold the print head module upright with one hand to allow the media pass under it. Lead the media through the media guides with the other hand.
9. Lead the media over the platen roller.



10. Turn back the print head module and then press it down firmly till you hear a snap.
11. Close the top cover and turn on the printer or press the feed button if the printer is already on.



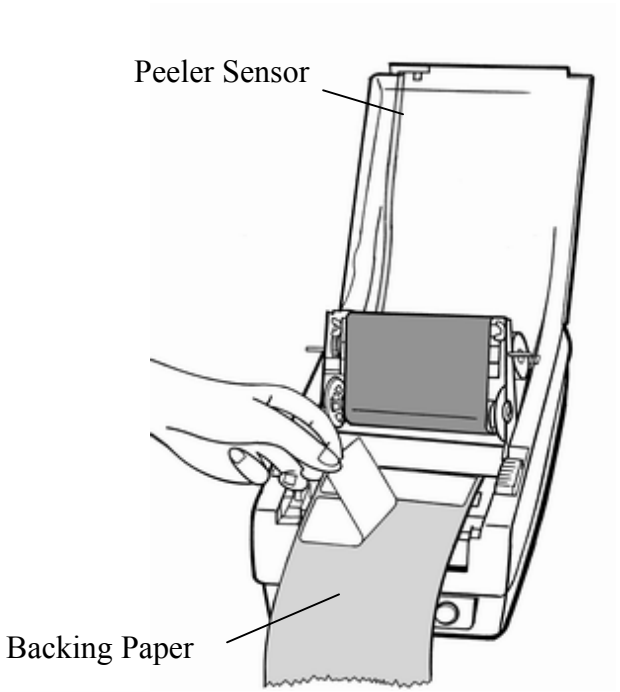


Peel Off Mode

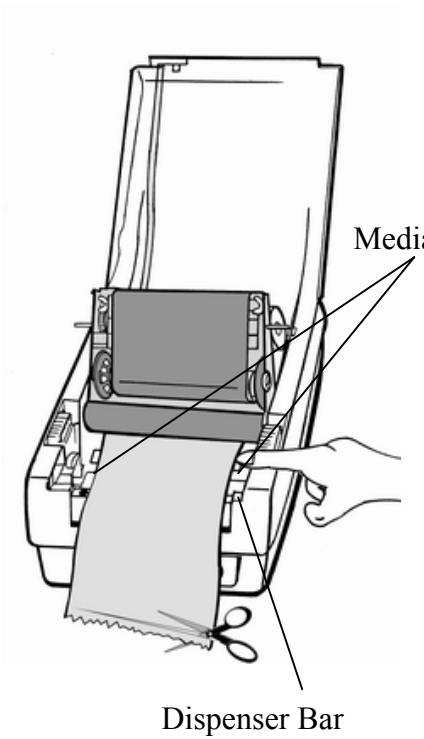
(Installing the dispenser kit, please refer to the Appendix I)

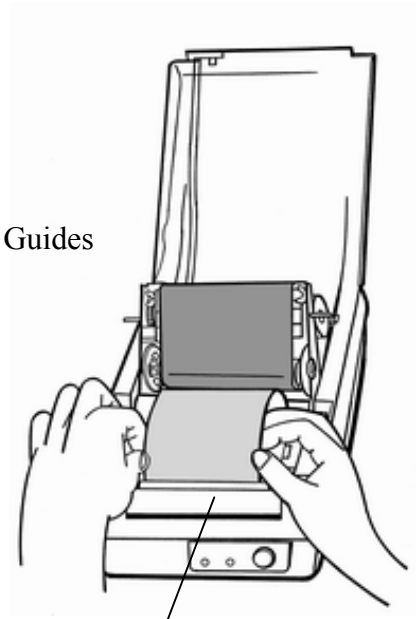
Follow the common procedure of "Loading the Media"of Standard Mode from step 1 to step 8.

9. Remove approximately 6" long labels from the label backing paper.

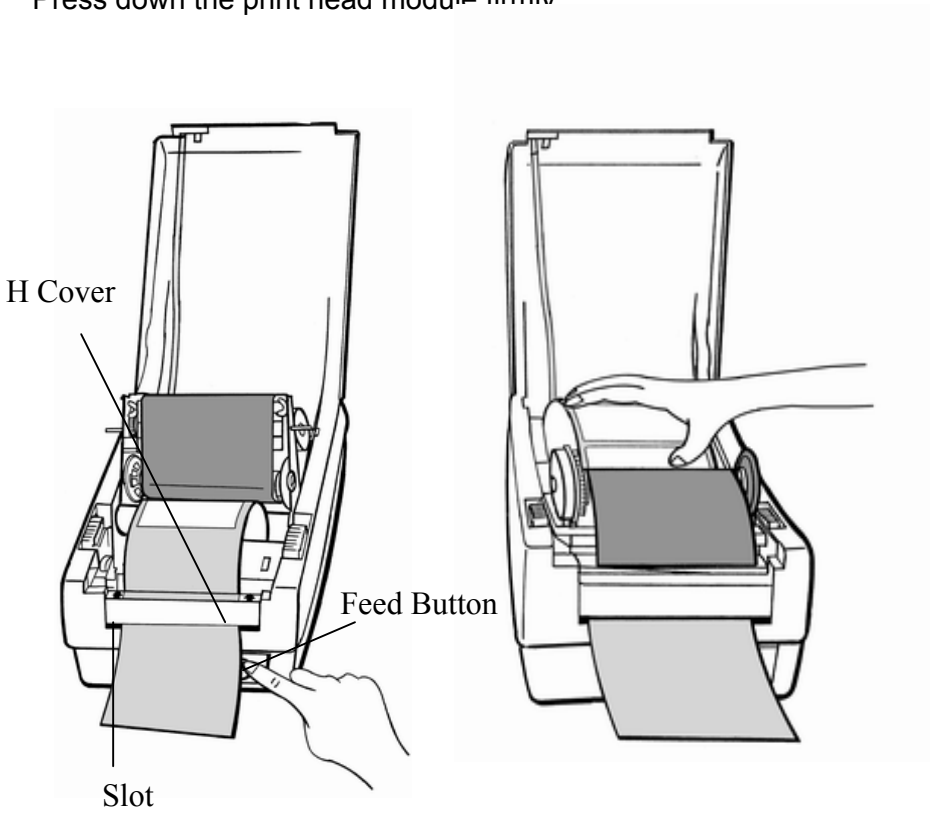


10. Trim the edge of the label backing paper with scissor or knife.
11. Lead the backing paper over the dispenser bar, then thread it back into the slot between the dispenser bar and H cover, ensuring that it is inserted between white plastic roller and platen roller.





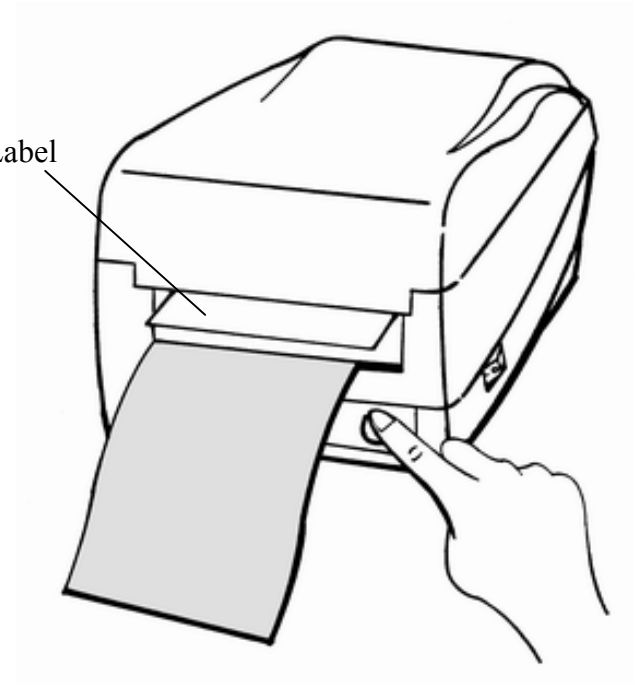
12. Press "FEED" button and the label backing paper will come out from the slot under the H cover.
13. On OS-202 Peel-Off mode, powered on status, in case of improper installation, just keep pressing the "FEED"button to back-feed the label stock to re-install it.
14. To remove any slack, just rewind the media onto the roll. Press down the print head module firmly



15. Close the top cover and turn on the printer or press the "FEED"
button if the printer is already on.

Note :

The "FEED" button will not drive the printer to peel. The peeling work can be executed only when the software setting is ready.

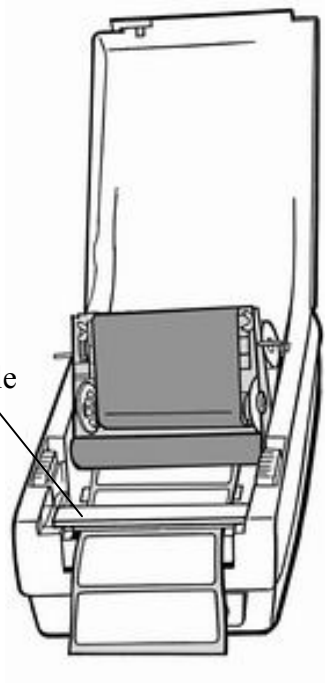


Cutter Mode

(Installing the cutter, please refer to Appendix ***II***)

Follow the same procedure as "Loading the Media" from step 1 to step 8.

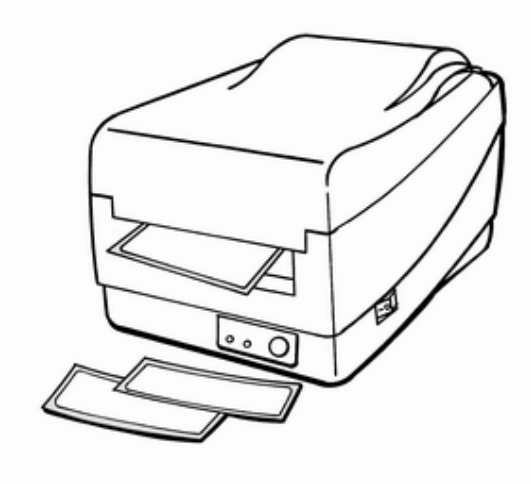
9. Thread the media over the platen roller, then route the media through the slot of the cutter module.
10. Press down the print head module firmly.



11. Close the top cover and turn on the printer or press the "FEED" button if the printer is already on.

Note:

The "FEED" button will not drive the printer to cut. The cutting work can be executed only when the software setting is ready.



Operator Controls

Power Switch

Controls printer power
On-normal operation
Off-the power should be turned off before connect or disconnect the communication cables and power cables

Feed Button

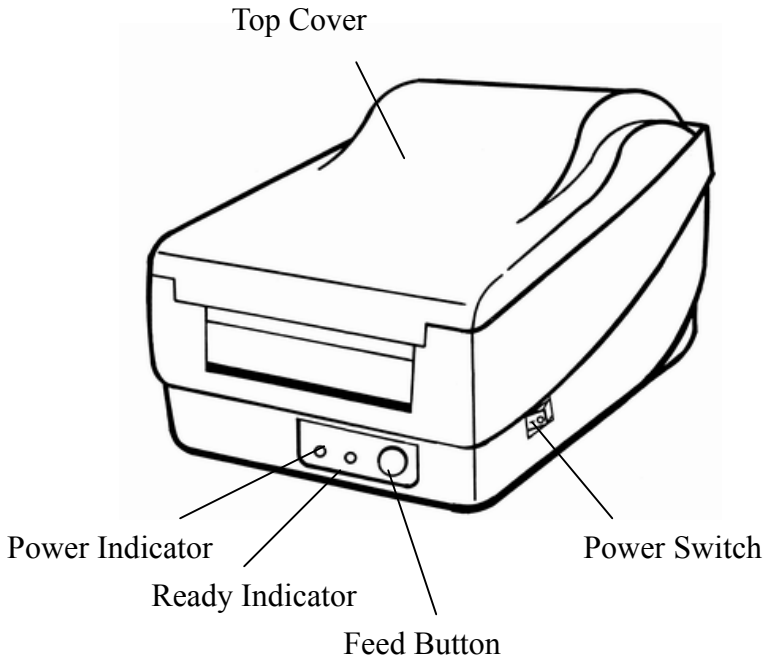
Advance the label media to first printing position
Press-to advance a label
Press-takes the printer out of a "pause" condition
Press-back feed the label to correct label installation, in case that label is not properly installed. (for OS-202 Peel-Off mode only)
Keep pressing while turning on the power- to print out a configuration profile

Ready Indicator

Show the printers status
Green-printer is ready to operate
Blinking-printer is paused

Power indicator

Shows the power and error status
Off-printer power off
Green-printer power on
Blinking-error occurs



Performing Calibration

1. Keep pressing the feed button while turning on the power, until the printing motor becomes activated.
2. The calibration has been performed while the printer automatically feed label stock for certain length.

Note:
This step is very important and must always be carried out whenever media is being changed. Failure to do so will result in miss-detection of the label sensor.

Printing Configuration Report

1. Keep pressing the feed button while turning on the power, until the printing motor becomes activated.
2. After feeding 12-inch blank media, the printing motor will suspend for one second, then it will print out the configuration profile. This profile states the firmware version, ROM checksum, RS232, thermal transfer/direct thermal settings, hardware configuration and font types.
3. At PPLB interpretation, the printer will enter character dump mode. To exit from dump mode, just press the feed button again.

Resetting the Printer to Factory Default Settings

1. Turn on the printer and wait for 5 or more seconds.
2. Press "Feed" button for about 10 seconds, then the "Ready" indicator and "Power" indicator will go off in order.
3. While two indicators become lit again, release the feed button.
4. At this moment, the printer will feed the label stock 12 inches in length, and come back to the factory default settings.

Note :
All settings are stored in non-volatile E2PROM and cannot be destroyed even turn off the printer.

Hooking up the Printer and Computer

Note :
The power supply barrel connector must be inserted into the power jack on the back of the printer before connecting the communication cables.

This printer comes with both a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface (for OS-202, it is six pin) and a standard Centronics parallel interface. In either case, you must supply the required interface cable for your application.

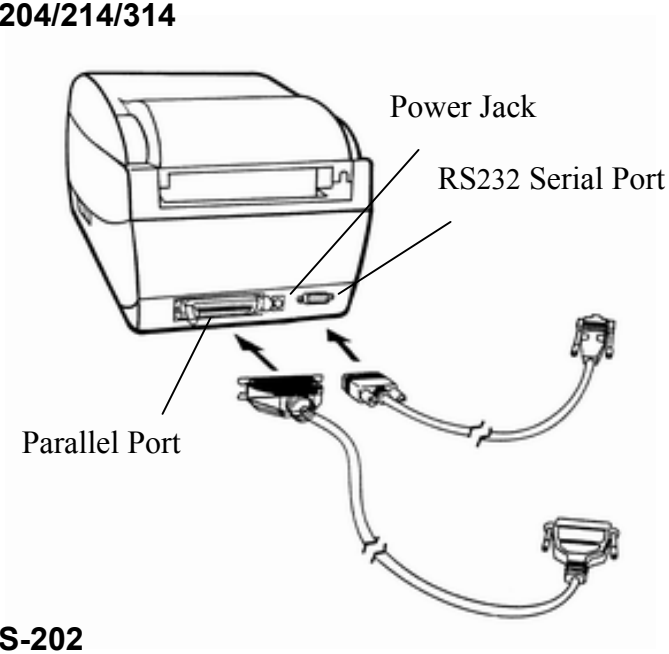
Note :
This printer complies with FCC "Rules and Regulations" , Part 15, for Class B Equipment, using fully shielded six-foot data cables. Use of longer cables or unshielded cables may increase radiated emissions above the Class B limits.

Serial (RS-232) Interface Requirements

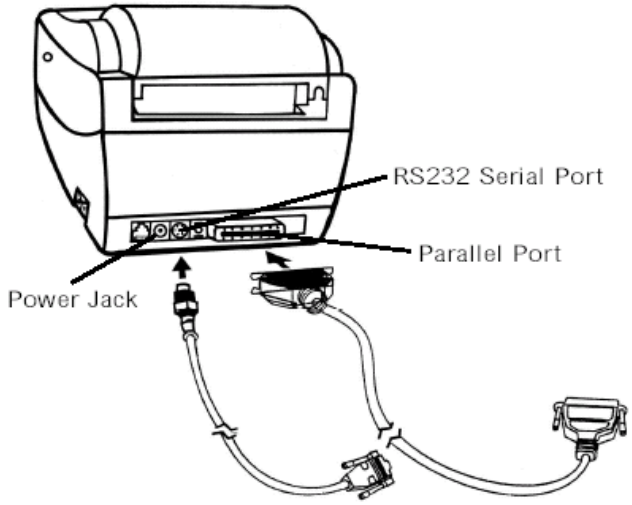
The required cable must have a nine-pin "D" type (for OS-202, six pin) male connector on one end, which is plugged into the mating serial port located on the back of the printer. The other end of this signal interface cable connects to a serial port at the host computer.

For technical and pinout information, please refer to the Reference Technical Information-Interface Specification on page 55 of this booklet.

OS-204/214/314



OS-202



Parallel Interface Requirements

The required cable (IEEE 1284-compliant is recommended) must have a standard 36-pin parallel connector on one end, which is plugged into the parallel port located on the back of the printer. The other end of the parallel interface cable connects to the printer connector at the host computer. For pinout information, refer to the Reference Technical Information- Interface Specification on page 55. Serial and Parallel Cabling Requirements.

Data cables must be of fully shielded construction and fitted with metal or metalized connector shells. Shielded cables and connectors are required to prevent radiation and reception of electrical noise.

To minimize electrical noise pickup in the cable:

■Keep data cables as short as possible (6 [1.83m] recommended).

■Do not tightly bundle the data cables with power cords.

■Do not tie the data cables to power wire conduits.

Notes :

1. ***Using Centronics allows for a much higher speed communication than the use of a serial.***
2. ***It is not necessary to set the switch or send any command to select the parallel or serial port . The printer can automatically detect it.***
3. ***The default settings can be read from the configuration report.***

Communicate with the Printer

The bundled printer driver can be applied to all the applications under Windows 2000/98/95, and Windows NT. Through this driver you may run any popular software applications e.g. MS-Word and print out the contents by this label printer as long as they are for Windows.

Before installation

1. Check the contents of the driver to ensure it is complete.
2. Make a backup copy of this driver.
3. Read the README.TXT file for installation guide and change notices.

Installing Driver

1. Click the "Start" button.
2. Select "Settings", then select "Printers" and double click the "Add Printer" icon. Click "Next".
3. Click the "Network" or "Local" button and click the "Next" button.
4. Click "Have Disk", click the pull-down menu to select CD ROM driver path.
5. Click "Browse" button.
6. Select the proper directory for installation:
   -WIN95
   -WIN98
   -WIN2000
   -NT4.0
   -
   -
7. The driver name "Label Dr. 200" (or Label Dr.300) will appear in the "List of Printers", click "Next".
8. Select the communication port for the label printer. For parallel port, select "LPT1 :", "LPT2 :" or "LPT3 :" , for serial port select "COM1 :" or "COM2 :".
9. After the related files have been copied to your system, the installation is complete.
10. If you need to print from the label printer, set "Label Dr. 200"(or Label Dr.300) as the Default Printer.

Notes :

1. If you are just updating your driver, make sure to delete the previous version first.

2. If you install a new bar code application software like ArgoBar, LabelView or CodeSoft, the Label Dr. 200 (or Label Dr. 300) driver should be activated and set as the current printer driver:

ArgoBar
File → New→ Select Printer→ Label Dr. on LPT1:→ OK

LabelView
File→ Select Printer→ Label Dr. on LPT1:→ OK

CodeSoft
File→ Printer→ Windows→ Label Dr. on LPT1:→ OK

LabelMatrix
File→ Printer Setup →Label Dr. on LPT1:→ OK

Set the Parameters

After installing the driver, you can follow the path below to set parameters:

Start →Settings→ Printers→ Label Dr.→ Properties

The parameters include:

Ports Select the IO port to link with the printer. The port may be one of parallel (LPT), serial (COM), network port or file.

Paper size Select the proper size on the menu. If there is no desired size, select "Custom" to define the paper size.

Orientation Set portrait or landscape according to the print direction.

Paper source (Media type) T/T stands for thermal transfer (ribbon) mode and D/T for direct thermal mode (without ribbon).

Media choice (Darkness) Set the heat value or darkness from this field. The darkness value ranges from 0 to 15.

Copies This function designates the number of printed copies of each page.

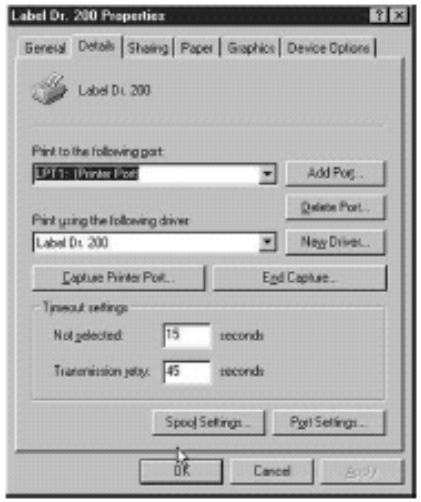
More option (Accessory setting) To use the cutter and peeler function you still need to enter More Options and select one of the items.

Device options (Speed) Set the print speed. For the AP 2.4, the speed ranges from 1 to 3 IPS.

For Win 98

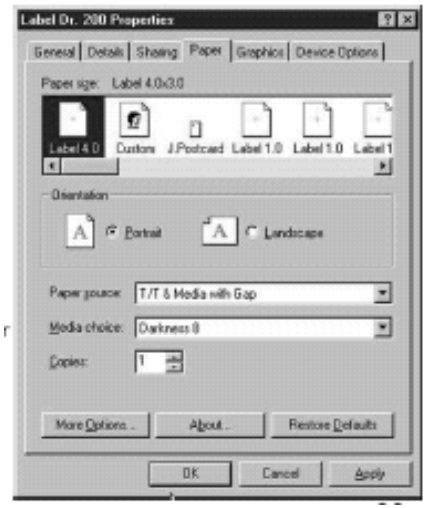
■ Ports

Properties menu
→ click "Details"
→ select the IO port
→ click "OK"



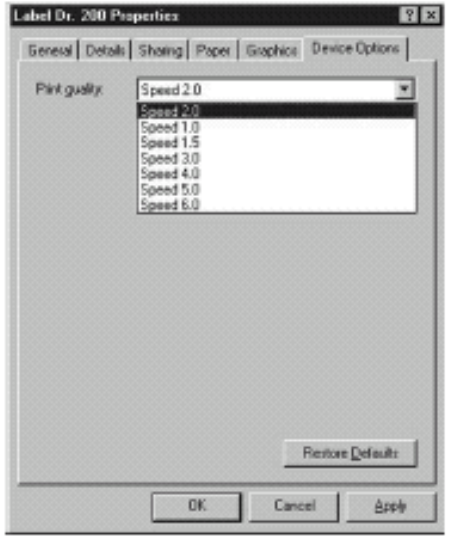
■ Paper size
■ Orientation
■ Paper source (Media type)
■ Media choice (Darkness)
■ Copies

Properties menu
→click "Paper"
→click each item to select desired parameter
→click "OK".

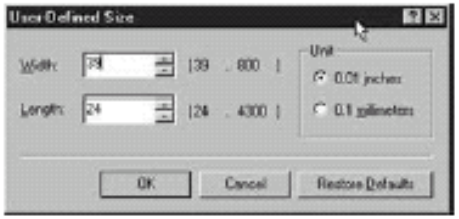


■ Output bin
(Accessory setting)
Properties menu
→ click "Paper"
→ click "more option"
→ select Enable/without
→ cutter, peeler
→ click "OK"

■ **Print quality**
(Speed)
Properties menu
→ click "Device Options"
→ select parameters
→ click "OK"

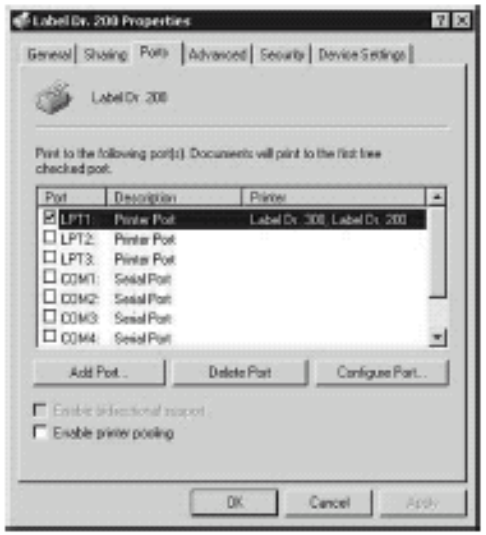


■ Create a new size
Properties menu
→ click "Paper"
→ select "Custom"
→ User-Define size
→ set up a new size
→ click "OK"

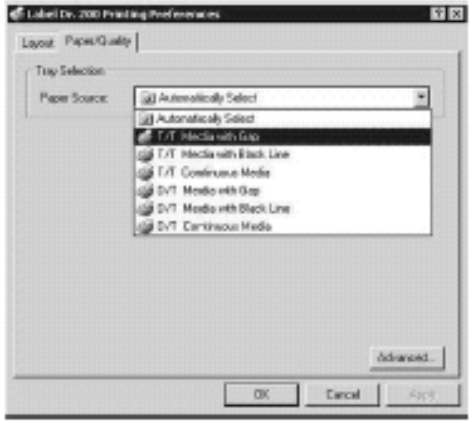


For Win 2000

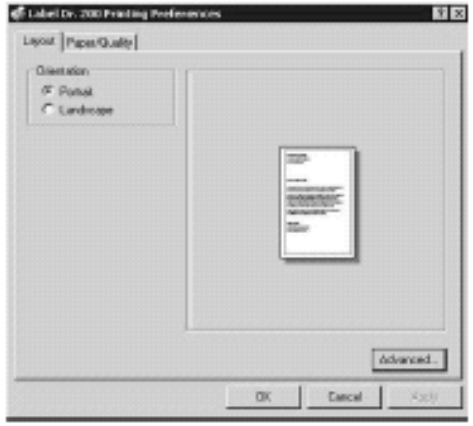
■ Ports
Properties menu
→ click "Ports"
→ select the IO port
→ click "OK"



■ Paper source
(Media type)
Back to Printers menu
→right click to get
pop-up menu
→ select "Printing
Reference"
→ click "Paper Quality"
select media type
→ click "OK"



■ Orientation
Printing Reference menu
→ click "Layout"
→ select "Portrait" or
"Landscape"
→ click "OK"



■Paper size
■Copies
■Media choice
(Accessory setting)
■Paper/Output
(Speed)
■Print quality
(Darkness)
Printing Reference menu
→click "Layout"
→click "Advanced"button
→click each item to select
the parameters
→click "OK"

■Create a new size

Printer menu

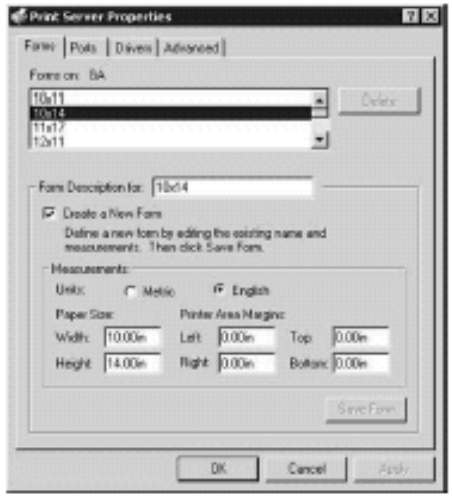
→ right click to get pop-up menu

→ select "Server Properties"

→ enter a form name for the new form in "Form description for"

→ reset the paper size in the specific squares of the "Measurements"

→ click "OK"



For NT 4.0

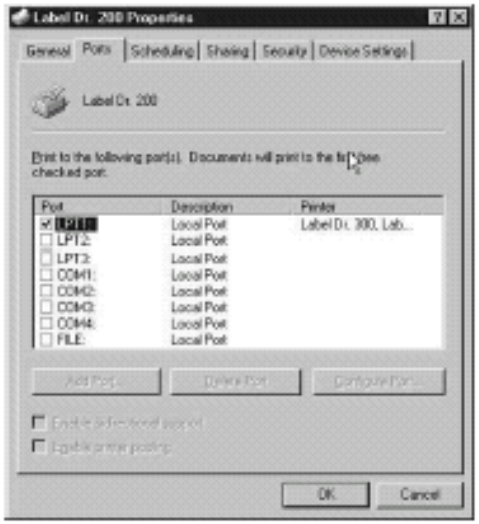
■Ports

Properties menu

→ click "Ports"

→ select the IO port

→ click " OK"



■ Paper size
■ Orientation
■ Paper source (Media type)
■ Copies
■ Media choice (Accessory setting)

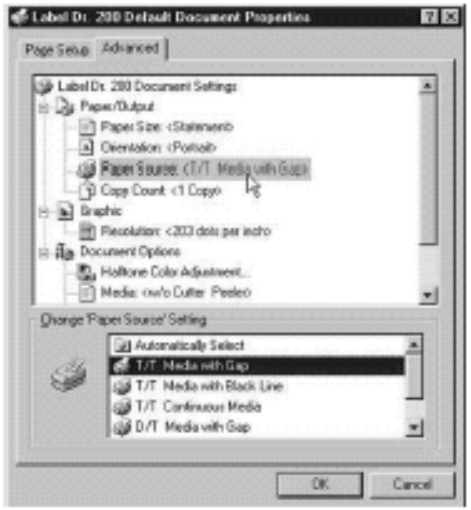
Printers menu

→ right click to get pop-up menu

→ select "Document Defaults"

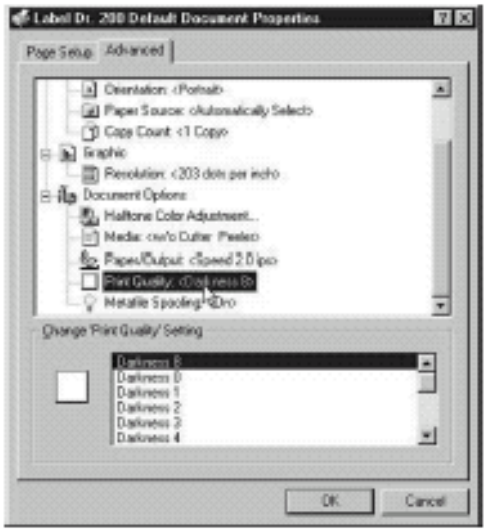
→ click "Advanced" button

→ click each item to select desired parameter



■ Paper/Output
■ (Speed)
Print quality

(Darkness)
Default Document menu
click "Advanced"
click each item to
select desired
parameter
click "OK"



■ Create a new size
Please refer to the
procedure of create a
new size on Win 2000.

Troubleshooting

Normally, when the printer is in abnormal condition, the "POWER" LED will keep blinking. The printing work and the communication between the host and printer will stop.

To understand the problem, please check both LEDs first:

A. Power and Ready LEDs blink at the same tempo

Power LED	Ready LED
ON	ON
OFF	OFF

Possible Problems	Solutions	Remarks
Miss-detect the gap	. Check the label path . Check the label sensor	If you are using continuous label roll and run under Windows, you should select the continuous media.
Label stock out	. Supply the label roll out	
Label stock not installed	. Install the label roll	
Label jam	. Recover the jam	

B. Power and Ready LEDs blink alternately

Power LED	Ready LED
ON	OFF
OFF	ON

Possible Problems	Solutions	Remarks
Ribbon out	Supply the ribbon roll	Not applicable to direct thermal type.
Ribbon jam	Recover the jam	
Ribbon sensor error	Replace the ribbon sensor	

Note:

*****For models OS-202/OS-204 such error will never occur.***

C. Only the Power LED blinks

Power LED	Ready LED
ON	ON
OFF	ON

Possible Problems	Solutions	Remarks
Serial IO error	. Check the baud rate	Not for Centronics
Memory full	Add the extension RAM	
Cutter failed, or jam at cutter	. Check the cutter . Recover the jam	It occurred, only when cutter is installed, or the setting of the cutter
Hardware error	Call for service	

D. Miscellaneous

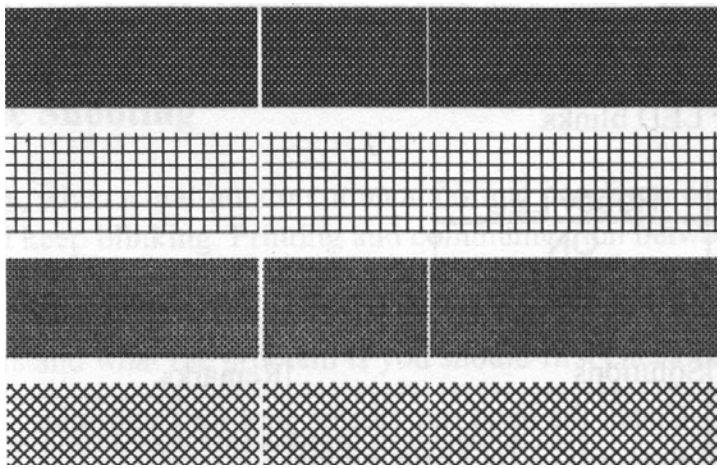
■ The host shows "Printer Time out"

1. Check if the communication cable(parallel or serial) is connected securely to your parallel or serial port on the PC and to the connector on the printer at the other end.
2. Check if the printer pow er is turned on.

■ If the power cord is connected, the power switch is at position "I" and the power LED has still not illuminated, check the fuse inside the power adapter case.

■ The data has been sent, but there is no output from the printer. Check the active printer driver, if Label Dr. for your Windows system and the label printer has been selected.

■ Vertical streaks in the printout usually indicate a dirty or faulty print head.(Refer to the following example)



Clean the print head first, if they still persist, replace the print head.

■ Poor printout quality.

. The ribbon may not be qualified.
. The media may not be qualified.
. Adjust the Darkness(heat temperature).
. Slow down the print speed.
. Refer to the next chapter and clean the related spare parts.

Recovery

To continue your print jobs after the abnormal conditions have been corrected, simply press the panel button or restart the printer. Make sure that the LED is not blinking and remember to resend your files.

Caring for Your Printer

Clean the following areas of the printer after 8 rolls of label stocks have been used. In each case, use a cotton bud dampened with alcohol. Do not soak the cotton bud excessively.

Note :
Always switch off the power before cleaning.

Cleaning

■Thermal Print Head

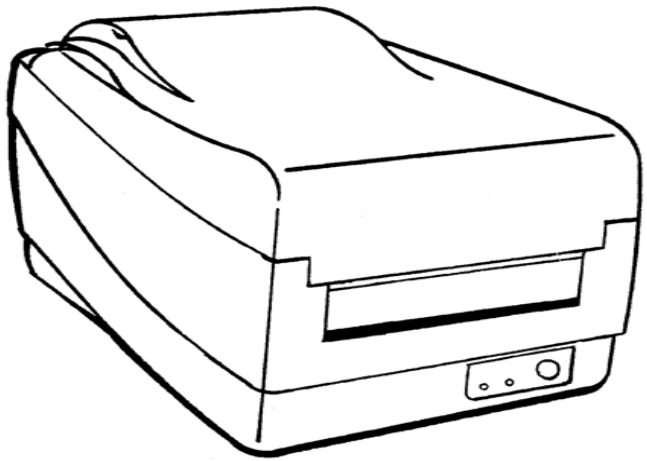
Thermal paper stock and ribbon will release debris on the print head and degrade printing quality. Clean the print head with methanol or isopropyl alcohol with a cotton bud. Do not touch the heater element with your fingers. Debris or dirt on the roller should be cleaned with alcohol.

■ Paper Sensor

Debris or dirt on the paper sensor will cause a miss-read or unstable detection of the label gap. Clean with a cotton bud dampened with alcohol.

Replacing Thermal Print Head

1. Switch off the power and wait for both LEDs to go off.
2. Unlatch the print head module.
3. Remove the ribbon.
4. Push the print head firmly into the casing and shift it to the left. It will release from the module.
5. Disconnect the print head cable.
6. Dissemble the print head and the mounting bracket by releasing screws.
7. Replace with new print head, then resemble the print head module in reverse order. Be careful not to touch the print head elements.



Reference Technical Information

1. General Specifications

Specification	Model OS-202DT	Model OS-204DT	Model AP 2.4	Model OS-314TT
Print method	Direct thermal		Direct thermal and thermal transfer	
Resolution	203 DPI (8 dots/mm)			300 DPI (12 dots/mm)
Maximum print width	2.20 in. (56 mm)	4.13 in. (105 mm)		4.25 in. (108 mm)
Maximum print length	45 in. (1143mm)**			30 in. (762mm)**
Maximum print speed	3.5 inches (89 mm) per second	2 inches (51 mm) per second	3 inches (76 mm) per second	2 inches (51 mm) per second
Onboard RAM	512 K bytes			2 M bytes
Rotation	0, 90, 180 and 270, 4 direction rotations			
Media type	I. Direct thermal: paper or vinyl, vinyl, visible light and infrared scannable label, tag, stock, butt cut or die cut, with various adhesives.			
	X		II. All above media, plus thermal transfer paper or vinyl labels and tags, butt cut or die cut, with various adhesives.	
Maximum label roll diameter	4.3 in.(109mm) outside diameter, 1 in.(25 mm) inside diameter			
Label indexing	Black stripe and gap			

Ribbon types Ribbon size	Wax, Wax/Resin and Resin OD 1.45 in. (37 mm); ID 0.5 in. (12.7mm); Length11		
Dimension	W5.3 x D9.0 x H6.4 in.	W7.3 x D10.9 x H6.0 in	
Weight	1.2Kg (2.6 lbs)	1.7 kg (3.74 lbs)	1.9 kg (4.1 lbs)
Electrical	FCC class A	FCC class B	FCC class A
	21VAC	19VAC	
	Or DC24V (min 2.5A), 50/60Hz		
	CE, UL and CUL approved.		
Operating temperature	40°F ~ 100°F (4°C ~ 38°C)		
Storage temperature	40°F ~ 140°F (4°C ~ 60°C)		
Humidity	15~85% RH		
Optional Accessories	● Serial (RS232) cable ● External media stacker (for media roll with max. 8-inch OD) ● Dispenser Kit ● Cutter ● Flash memory ● Font board ● Extension RAM ++ (0.5M for models 204/214/314 only) ● RTC board ● USB-Interface ● Standalone KDU-ArgoKee ● Network print server-ArgoNet		

2. Fonts, Bar Codes and Graphics Specification

The specifications of fonts, bar codes and graphics depend on the printer interpreter. The emulation is a printer programming language, through which the host can communicate with your printer. There are two printer programming languages for models 202/204/214/314, they are PPLAand PPLB.

Printer Programming Language A, PPLA

Specification	Model OS-202DT	Model OS-204DT	Model AP 2.4	Model OS-314TT
General fonts	7 alpha-numeric fonts, OCR A and OCR B ASD			
Smooth fonts	6, 8, 10, 12, 14 and18 points			4, 6, 8, 10, 12, 14 and 18 points
Symbol sets for fonts smooth	USASCII, UK, German, French, Italian, Spanish, Swedish, and Danish/Norwegian			
Courier fonts	8 symbol set (PC, PC-A,PC-B EAMA-94, Roman8, Legal, Greek and Russian)			X
Soft fonts	Downloadable PCL fonts			
Font expandability	1x1 to 24x24			
Bar code types	Code 39, Code 93, Code 128/subset A,B,C, Codabar, Interleave 2 of 5, UPC A/E/2 and 5 add-on, EAN-8/13, UCC/EAN-128, Postnet, Plessey, HBIC, Telepen and FIM. MaxiCode and PDF417 (2D symbologies).			
Graphics	PCX, BMP, IMG and HEX formats			

Printer Programming Language B, PPLB

Specification	Model OS-202DT	Model OS-204DT	Model AP 2.4	Model OS-314TT
General fonts	5 fonts with different point sizes			
Symbol sets (Code pages)	8 bits: code page 437, 850, 852, 860, 863 and 865. 7 bits: USA, British, German, French, Danish, Italian, Spanish, Swedish and Swiss.			
Soft fonts	Downloadable soft fonts			
Font expandability	1x1 to 24x24			
Bar code types	Code 39(checksum), Code 93, Code 128/ subset A,B,C, Codabar, Interleave 2 of 5(checksum), Matrix 25, UPC A/E 2 and 5 add-on, EAN-8/13, Code 128UCC, UCC/EAN, Postnet, German Postcode. MaxiCode and PDF417 (2D symbologies)			
Graphics	PCX and binary raster			

Notes :

1. ***The bare core for ribbon must be 11 cm in length. It should have two opposite slits at two ends. If the ribbon itself is less than 11 cm, it has to be aligned with the bare core at left end when you install it.***
2. ***Since this printer uses band buffer technology, if you just print texts or barcodes the maximum length can be more than 30 inches, whereas if you print many graphics the maximum length can only be few inches under standard onboard RAM.(The extension RAM, font board and flash modules use the same connector, they cannot function at the same time.)***

3. Interface Specifications

Serial

For Ap 2.4, the RS232 connector on the printer side is a female, DB-9.

Pin	Direction	Definition
1	In	DSR
2	In	RxData
3	Out	TxData
5	-	Ground
6	Out	DTR
7	Out	RTS
8	In	CTS
9	Out	+5V

Pin	Direction	Definition
1	Out	+5V
2	-	Ground
3	Out	RTS
5	In	CTS
6	In	RxData
8	Out	TxData

Note :
Pin 9 on AP 2.4 are reserved for KDU(keyboard device unit), therefore do not connect these pins if you are using a general host like a PC.

Connection with host:

Host 25S (PC or compatible)		Printer 9P	Host 9S (PC or compatible)		Printer 9P
DTR 20	……	1 DSR	DTR 4	……	1 DSR
DSR 6	……	6 DTR	DSR 6	……	6 DTR
TX 2	……	2 RX	TX 3	……	2 RX
RX 3	……	3 TX	RX 2	……	3 TX
CTS 5	……	7 RTS	CTS 8	……	7 RTS
RTS 4	……	8 CTR	RTS 7	……	8 CTS
GND 7	……	5 GND	GND 5	……	5 GND

Alternatively you can just connect the 3 wires in the following way.

Host 25S (PC or compatible)		Printer 9P	Host 9S (PC or compatible)		Printer 9P
TX 2	……	2 RX	TX 3	……	2 RX
RX 3	……	3 TX	RX 2	……	3 TX
GND 7	……	5 GND	GND 5	……	5 GND
pin 4			pin 4		
pin 5			pin 6		
pin 6			pin 7		
pin 20			pin 8		

The most simple way to connect to other hosts(not PC compatible) or terminals is:

Printer		Terminal/Host
Pin 2- RxData	……	TxData
Pin 3- TxData	……	RxData
Pin 5- Ground	……	Ground

In general, as long as the data quantity is not too large and you use Xon/Xoff as flow control, it will be problem free.

Baud rate: 2400, 4800, 9600, 19200 and 38400.
(programmable by command)

Data format : always 8 data bits, 1 start bit and 1 stop bit.

Parity : always non parity

Handshaking : XON/XOFF as well as CTS/RTS (hardware flow control).

If you run an application with the bundled printer driver under Windows and use the serial port, you should check the above parameters and set the flow control to "Xon/Xoff "or "hardware".

Parallel (Centronics)

The parallel port is a standard 36-pin Centronics. Its pin assignments are listed as following.

Pin	Direction	Definition	Pin	Direction	Definition
1	In	/STROBE	13	Out	SELECT
2	In	Data1	14,15		NC
3	In	Data 2	16	-	Ground
4	In	Data3	17	-	Ground
5	In	Data4	18NC		
6	In	Data5	19~30	-	Ground
7	In	Data6	31		NC
8	In	Data7	32	Out	/Fault
9	In	Data8	33~36	-	NC
10	Out	/ACK			
11t	Out	BUSY			
12	Out	PE			

Auto Polling

Both the serial port and parallel port of this printer can be activated at the same time, i.e the printer can simultaneously communicate with two PC via different port. However as no port contention is made for this printer, if both PC transmit data at the same time to this printer, the data may become damaged in the receiving buffer.

4. ASCIITABLE

NUL			0	@	P	'	P
SON	XON	!	1	A	Q	a	q
STX		"	2	B	R	b	r
	XOFF	#	3	C	S	c	s
		$	4	D	T	d	t
	NAK	%	5	E	U	e	u
ACK		&	6	F	V	f	v
BEL		'	7	G	W	g	w
BS		(	8	H	X	h	x
		)	9	I	Y	i	y
LF		*	:	J	Z	j	z
	ESC	+ ;	;	K	[	k	{
FF		,	<	L	\	1	I
CR		-	=	M	]	m	}
SO	RS	.	>	N	^	n	~
SI	US	/	?	O	_	o	DEL

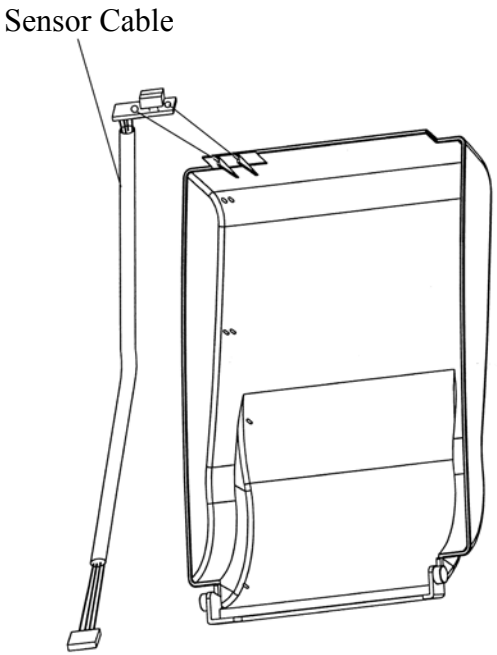
Appendix I - Installing Dispenser Kit

1. Turn off the printer power and unplug the printer.
2. Unwrap the PC bag of dispenser kit to take out the screw, the shaft, the plastic roller, the dispenser bar, the direction label and the peeler sensor cable.

Top Cover

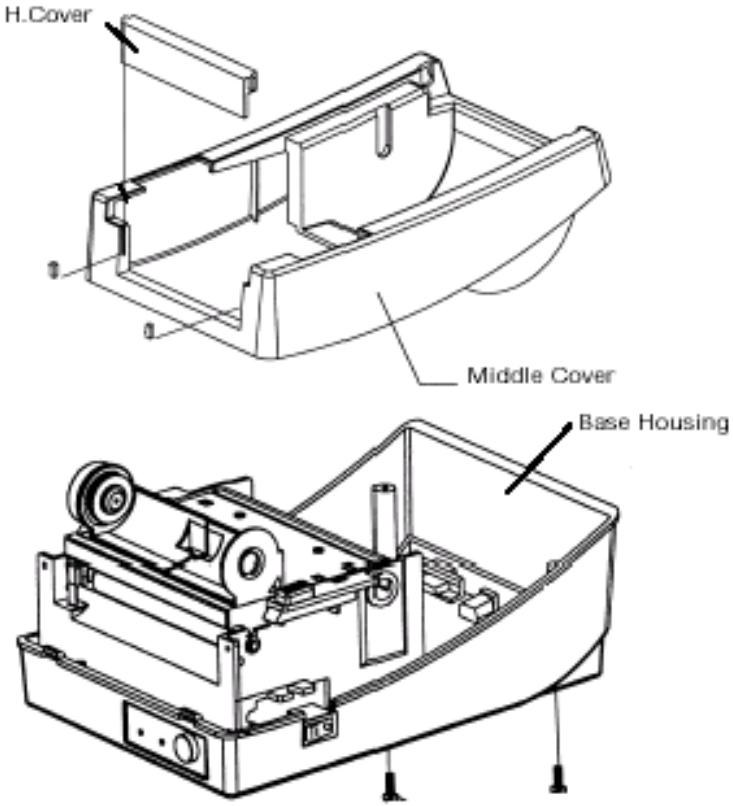
3. Take off the top cover of the printer.
4. The peeler sensor cable has a sensor board at one end and a connector at the other end.
5. Mount the two little holes of the sensor board on the two spines at left upper corner inside the top cover, keeping the cable at the left.

6. Route the peeler sensor cable through the guides along the left side of the top cover.
7. Fix the sensor cable and sensor board with Loctite-444 instant adhesive or equivalent.



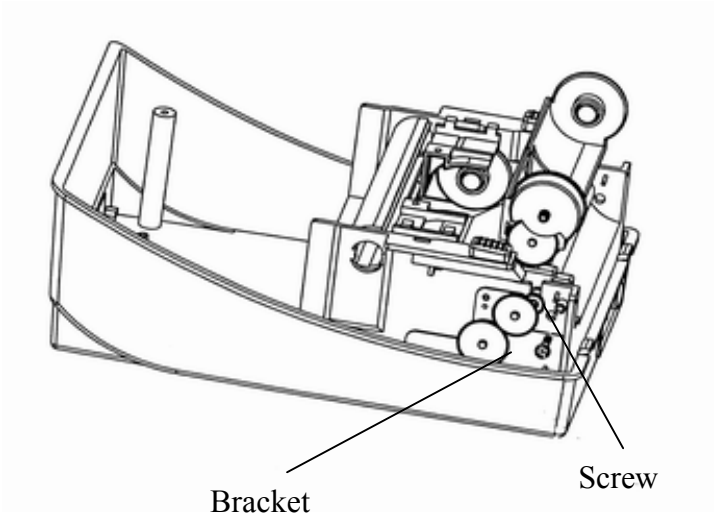
Middle Cover

8. Release the two screws at the bottom of the base housing.
9. Remove the middle cover.
10. Take off the H Cover.
11. Tape the direction label on the top of the H cover with the arrow sign heading toward the opposite of you.



Base Housing

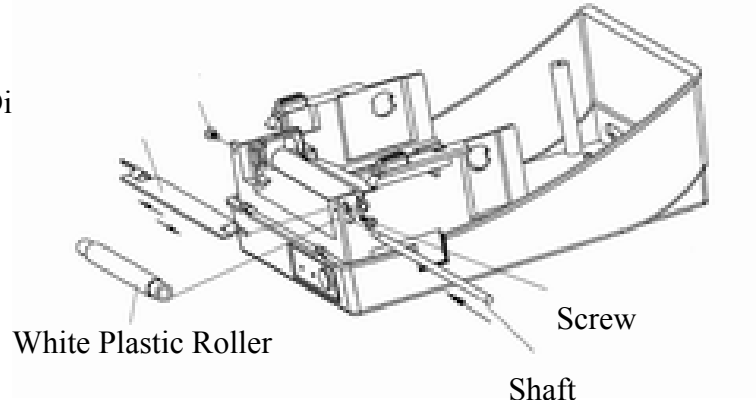
12. Release the screw on the left bracket of the chassis.



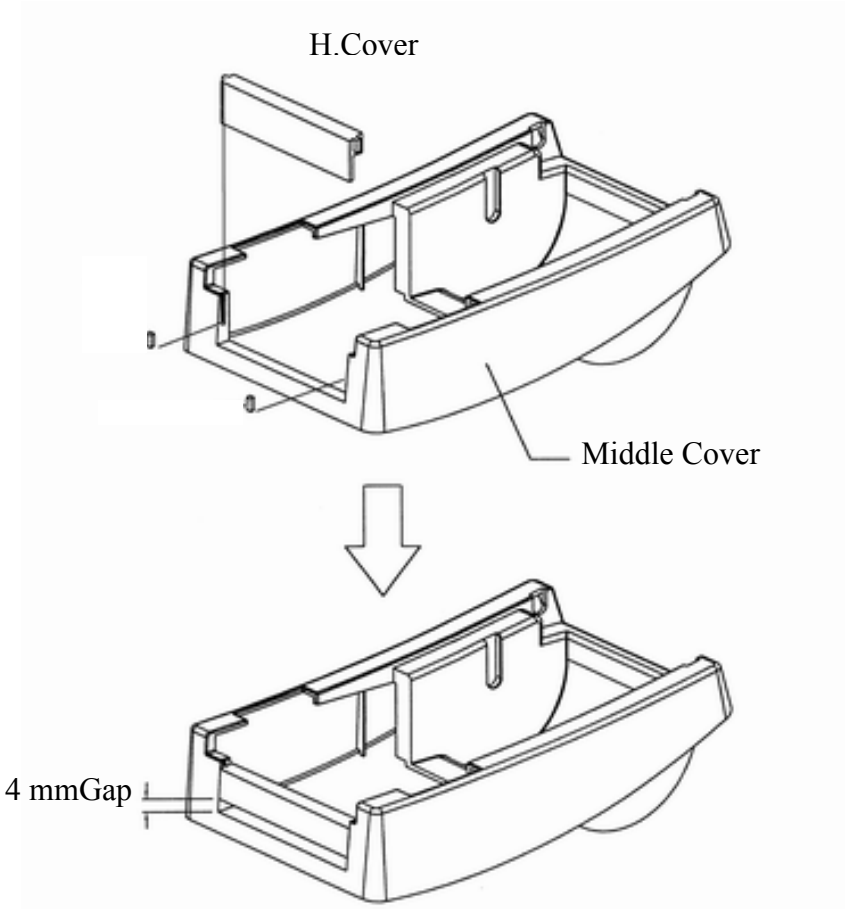
13. Unlatch the print head module. Hook the white roller on the brackets of the chassis, ensuring the long thinner end at the left side.
14. Guide the shaft go through the respective holes on the left bracket, the white roller, and the right bracket in order. (To smooth this procedure, better hold the white roller with one hand.)
15. Secure the attached screw at right bracket of the chassis to fix the shaft.

16. Hook the dispenser bar on the brackets of the chassis, positioning it above the white roller. Ensure that the dispenser bar is paralleled with the black platen roller and it's long thinner end is at the left.
17. Secure back the screw on the left bracket of the chassis.
18. Guide the sensor cable connector through the hole on the upper left corner of middle cover.

Di

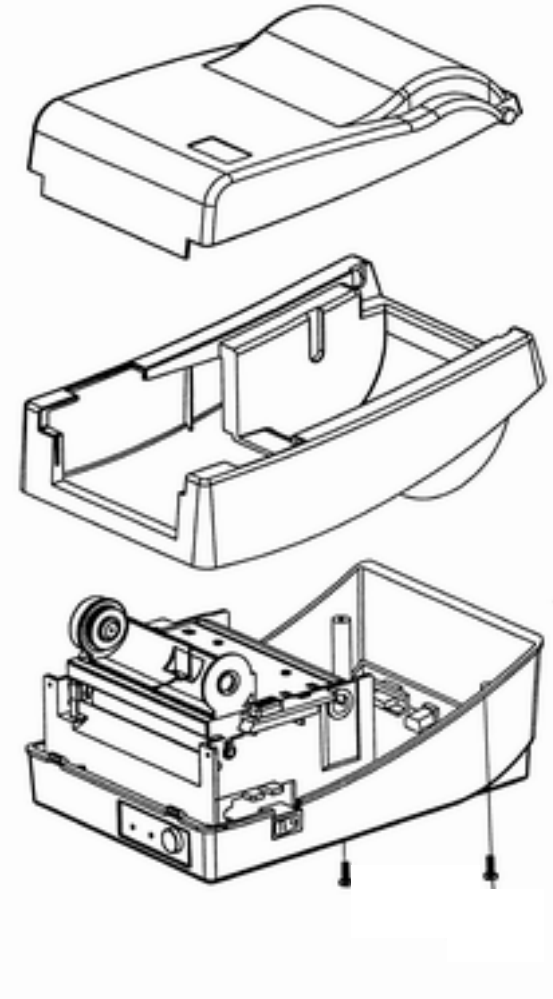


19. Click the top cover back to the middle cover.
20. Insert the sensor connector into its receptacle on the main logic board of the base housing.
21. Click the middle cover back to the base housing. First click in the front part then the rear.
22. Secure the two screws at the bottom of the base housing.

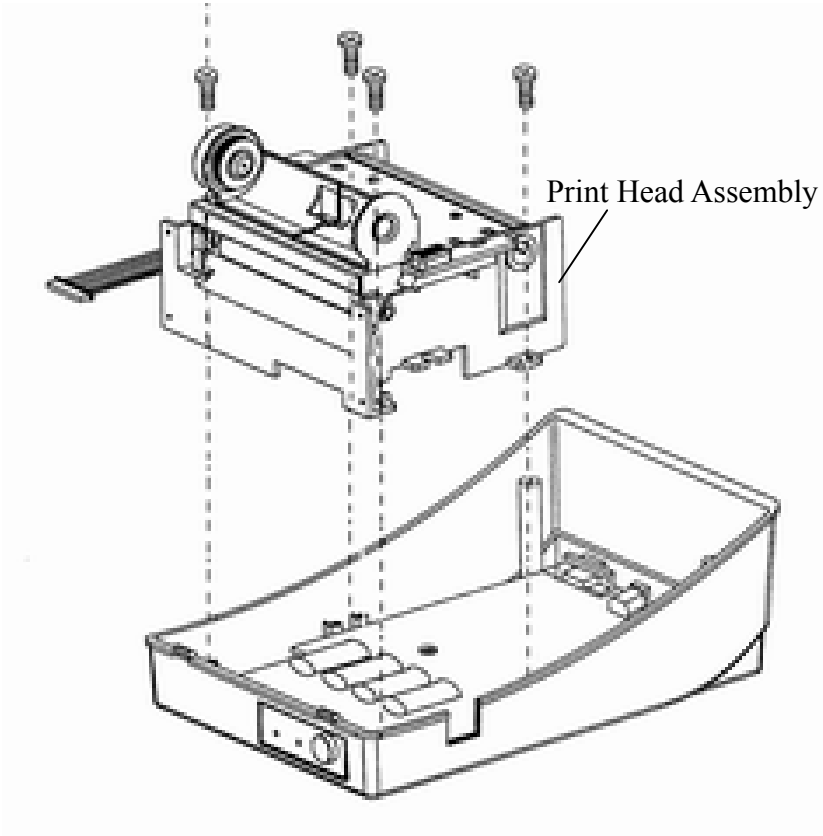


Appendix II - Installing the Cutter

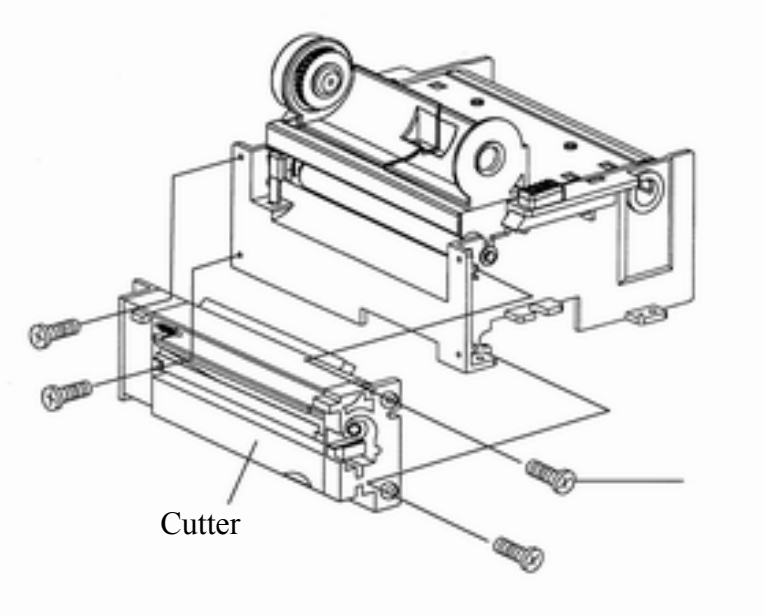
1. Turn off the printer power, unplug the power cable and Centronics / Serial cable.
2. Remove the top cover.
3. Remove t



4. Remove the whole print head assembly by releasing 4 screws at its feet.



5. Add a driver IC to U19 on the main board.
6. Secure four attached screws for the cutter.



7. Plug the cutter's connector into the PCB's header connector (JP13).
8. Reinstate the print head assembly by securing back the 4 screws.
9. Click back the middle cover.
10. Secure two screws back at base housing.
11. Click back the top cover.